Basin 13: Connecticut River and minor tributaries

Including the following sites:

Bellows Falls	Connecticut River, Bellows Falls, VT and Walpole, NH
Lulls Brook Gorge	Lulls Brook, Hartland
Sumners Falls	Connecticut River, Hartland, VT and Plainfield, NH

This is a small basin consisting of the floodplain of the Connecticut River and some short tributary streams in southeastern Vermont. It is an area of low relief and has only a few falls.

Bellows Falls is an industrialized site and of little natural interest, Lulls Brook Gorge is a nice small site, and Sumners Falls (really a set of bad rapids and barely a falls) is a major botanical site.*

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* At which, to our dismay, all the rarest plants are providentially on the New Hampshire side of the river.

Report 74, Bellows Falls, Connecticut River, Bellows Falls, Windham County, Vermont and Walpole, Cheshire County, New Hampshire.

Site X, surveyed on 3 October 1983 by P.F. Zika.

A major hydropower site, a small remnant cascade, another short cascade below a small dam, and a gorge.

Atlas map 8, Bellows Falls 15' quadrangle. The site is the channel of the Connecticut River in Bellows Falls, below the big dam.

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The site is located just east of the center of Bellows Falls. There is a large dam opposite the north end of town. The dam diverts much of the flow of the river into the Bellows Falls barge canal, which lies to the west of the natural river channel and goes to the hydropower station. The natural channel is largely dry when the river is low but fills at high water and after storms.

The site is thoroughly industrial, with roads, buildings and bridges all around.

The Connecticut is a large alluvial river at Bellows Falls. Above the dam, it is over 100 yards wide.

The dam is perhaps 40 feet high and 120 yards across. Below it, there is a second smaller dam, then a small cascade, then a gorge perhaps 100 yards long and 40 feet deep. The walls of the gorge are vertical and chunky, and there are only a few small potholes and no real sculpture. The gorge is spectacular when the water pours through it but not very impressive when dry.

The rock is Bethlehem gneiss of middle Devonian, a common rock in New Hampshire but limited to Bellows Falls in Vermont.

The gorge is very sparsely vegetated and the plants are all ordinary.

There is a historical record for the rare vetch **Astragalus alpinus** from Bellows Falls. The vetch is usually a river ledge plant. It was collected only once, in the 1890's, by Willard W. Eggleston. Careful search failed to turn up the species, but it may not have been visible so late in the season. The diversion of most of the river flow has probably altered the habitat for the species. There are no current records of **Astragalus alpinus** in Vermont. The old stations for the species were all at Connecticut River sites which have since been dammed, and the species may be extinct in the state.

BELLOWS FALLS

The only species of interest found at the site was **Trisetum spicatum**, a grass confined to rocky shores and mountain slopes in Vermont. The species list is moderately long because about one-half mile of channel was surveyed, but except for the **Trisetum** contains all common species.

The site gets no use. We liked the chunky appearance of the gneiss, but otherwise could not find much to admire. The river does boil through here sometimes, though. Ancient Indian carvings are located on the east wall of the gorge, below the site.

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Summary: Industrial setting, nice rocks, botany average, formerly one rare species, no wildness, site messy, disgusting water, no swimming or fishing, no current recreational use.

Vascular Plants of Bellows Falls and Gorge

Lonicera tartarica
Aster cordifolius
Solidago junceus
Cornus stolonifera
Thalictrum polygamum
Populus tremuloides
Athyrium filix-femina
Rubus idaeus
Lythrum salicaria
Toxicodendron radicans
Solidago graminifolia
Poa pratensis
Poa compressa
Juncus tenuis
Bidens frondosa
Cerastium vulgatum
Oxalis europaea
Erigeron strigosus
Lycopus uniflorus
Onoclea sensibilis
Eupatorium maculatum
Solanum dulcamara
Osmunda claytoniana
Panicum dichotomiflorum
Vitis riparia
Chenopodium album
Panicum capillare
Cornus rugosa
Panicum capillare
Andropogon gerardii
Populus deltoides
Solidago juncea
Apocynum sibiricum
Trisetum spicatum
Dryopteris marginalis
Thelypteris phegopteris

Report 75, Lulls Brook Gorge, Lulls Brook, Hartland, Windsor County, Vermont.

Site 958, surveyed on 3 October 1983 by P.F. Zika.

A steep-sided ravine with short sections of rock walls, and several small cascades.

Atlas map 16, Hartland 7.5' quadrangle. The gorge is west of the interstate highway, and can be reached by driving south from the center of the Village of Hartland on U.S. Route 5 about 0.3 miles. Route 5 crosses Lulls Brook at the head of the gorge.

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The site is rural, with open land, second-growth woods and a few houses nearby. The slopes of the gorge are partly open, partly scrubby and partly forested with hemlocks and hardwoods.

Lulls Brook is an alluvial stream, about 20 feet wide below the gorge, with clear, cold, fairly clean water. It has some algae but appears to be well oxygenated and has aquatic insects. It may receive some sewage upstream, but so far as we can tell from maps, there are no waste treatment plants upstream.

The gorge is about 200 yards long and 30-50 feet deep, with vertical rock walls on the eastern side. The ledges on the west side are smaller and alternate with steep dirt slopes. In the upper portion of the gorge, there are three cascades from six to ten feet high, each followed by a small pool. Lower in the gorge there is a long low-angle cascade about 15 feet high. In one area the ledges are undercut a foot or two by the main channel. Towards the bottom of the gorge are the remains of a mill and a large pipe. A footbridge crosses high over the stream channel below the site.

The rock was soft phyllite from the Devonian Gile Mountain formation. It was somewhat limy. A few small potholes were seen.

No uncommon vascular plants were found. Bryophytes were common in one area but are not particularly important in the gorge as a whole. One species (**Timmia megapolitana**) was only seen at one other site in this survey and may be rare in the state.

The gorge is not much used because of the cliffs blocking access on the east and the dense brush and wet ground to the west. Only one small pool was deep enough for bathing. Fishing may be possible at the lower end of the gorge. The top of the cliff on the east side offers a nice view of the gorge, and is a local party place. Some trash was seen.

LULLS BROOK GORGE

An interesting place, bigger and more diverse than you usually find in this part of the state. No single feature is extremely fine but taken together the site is above average and we rate it as more than locally significant.

There is a proposal to build a hydropower project* here, with a 15 foot high dam just below the Route 5 bridge. The majority of the cascades would be bypassed by a penstock, although a minimum flow would be required in the bypassed area.

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Summary: Rural setting, average rocks, average botany, some wildness, some trash, clean or mildly polluted water, no swimming, possibly some fishing. Threatened by a hydro proposal.

*NOTE: Hydro project under construction in 1985.

Plants of Lulls Brook Gorge

Bryophytes

Myurella sibirica	? from Pottiaceae
Grimmia alpicola	Anomodon attenuatus
Mnium sp.	Bracthythecium populeum
Timmia megapolitana	Bracthythecioum ? plumosum
Amblystegium sp.	Plagiochila asplenioides
Marchantia polymorpha	

Vascular Plants

Lonicera morrowi	Plantago major
Cynanchum nigrum	Aster umbellatus
Parthenocissus quinquefolius	Bromus ciliatus ?
Elymus riparius	Toxicodendron radicans
Solidago flexicaulis	Aralia racemosa
Galium mollugo	Aster lateriflorus
Eupatorium rugosum	Anemone virginiana
Eupatorium maculatum	Aquilegia canadensis
Taraxacum officinale	Glechoma hederacea
Cystopteris fragilis	Myosotis scorpioides
Onoclea sensibilis	Impatiens sp.
Oxalis europaea	Erigeron canadensis
Aster cordifolius	Erigeron annuus
Aster puniceus	Juncus sp.
Geranium robertianum	Tsuga canadensis

Report 76, Sumner Falls, Connecticut River, Hartland, Windsor County, Vermont, and Plainfield, New Hampshire

Site Q, visited a number of times 1981-1983 by J.C. Jenkins and P.F. Zika.

A set of rapids with several low falls, famous for rare plants.

Atlas map 16, USGS Hartland 7.5' quadrangle. Take Route 5 about one and one-half miles north of Hartland; immediately after crossing the interstate look for a dirt road to the right which leads to the falls.

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The area is really a set of whitewater rapids. The site consists of low rocks and small falls in the Connecticut River. The falls are a maximum of three feet high. It is a sudden and dangerous set of rapids, probably Class IV at moderate water and Class III at low water. Boaters have been hurt here, but most of the accidents probably resulted from people encountering the rapids accidentally rather than from people deliberately seeking difficult water.

The ledges on the sides of the river are important sites for rare plants, and have been much studied. The New Hampshire side has **Tofieldia glutinosa**, several interesting sedges, and two species of **Astragalus**. The Vermont side lacks these but does have nice colonies of two asters, **Aster linariifolius** and **Aster tradescantii**.

The site is rated as high importance for the rare plants; it is also a favorite fishing and swimming spot.

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Summary: Wooded site setting, interesting and dangerous rapids, average rocks, exemplary botany with many rare species, fairly wild, some trash, mildly polluted water, good swimming, popular site for boating, fishing, swimming and botany.

HIGH IMPORTANCE: Botanical site and whitewater area.